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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/986,695 | 11/09/2001 | Hideo Yamamoto | Q67179 | 5833 |

7590 02/13/2004

SUGHRUE, MION. ZINN
MACPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3202

| EXAMINER |
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MCCHESENEY, ELIZABETH A

| ART UNIT | PAPER NUMBER |
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2644

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,695

Applicant(s)

YAMAMOTO ET AL.

Examiner

Elizabeth A McChesney

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

Art Unit: 2644

DETAILED ACTION

1. This action is in response to applicant's response filed 12/29/03. Claims 1-9 are now pending in the present application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-9** are rejected under 35 U.S.C. 102(b) as being anticipated by Cherry (US Patent No. 3,702,901).

Regarding **claims 1-3**, Cherry discloses a volume balance and fader control circuit for a four channel sound reproducing system wherein the average total volume of the sum of the four channels is not affected by adjusting the balance and fader controls of the system (col. 1-lines 59-67 and col. 2-lines 1-3). Cherry further discloses that adjusting the balance or fader control merely changes the division of DC power and not the sum or overall total gain of the channels (col. 2-lines 16-20). Cherry discloses the system's use in an automobile (col. 3-lines 19-22 and see figures 2 and 3) and further that the operator of the auto can balance himself to be in the center of sound (col. 3-lines 41-45). Cherry discloses a balance control for the left and right speaker balancing as well as a fader control for front and back speaker balancing (col. 3-lines 63-67 and

Art Unit: 2644

col. 4-lines 1-2) which therefore controls the output volume of the four channels. Cherry further discloses a potentiometer which acts as the fader control for balancing the audio condition between the forward 22, 26 and back 20, 24 sets of speakers, wherein one end is connected to the first and third channels 36, 40 and the other end is connected to the second and fourth 38, 42 channels (col. 4-lines 40-58). The potentiometer is connected as a voltage divider with a movable contactor dividing the a fixed amount (for example k_1 , K_1) of DC voltage between the forward and rear sets of channels (col. 5-lines 1-4) but providing the total sum of DC voltage remains the same (col. 4-lines 49-53). Therefore it would have been obvious to one of ordinary skill in the art to adjust the fader control to amplify by some factor (for example k_1) to provide an increase to the front or rear speakers, while the total voltage remains the same, this would provide the system with an attenuation factor opposite front or rear by an equal decreasing volume.

Regarding **claims 4 and 5**, Cherry discloses the system's use in an automobile (col. 3-lines 19-22) wherein the operator of the vehicle can balance himself to be in the center of sound (col. 3-lines 41-45). Cherry discloses a balance control for the left and right speaker balancing as well as a fader control for front and back speaker balancing (col. 3-lines 63-67 and col. 4-lines 1-2) which therefore controls the output volume of the four channels. It is inherently taught that balancing the sound in the center as the prescribed position provides the channels with an equal relationship from this point. Therefore, since dividing the fixed amount (for example k_1 , K_1) of DC voltage between the forward and rear sets of channels (col. 5-lines 1-4) provides the total sum of DC voltage remains the same (col. 4-lines 49-53) provides the attenuation computation from

Art Unit: 2644

the prescribed position in relation to each speaker by counteracting the opposite. For example a level adjusting fade (decrease) by an arbitrary k_1 in the front would result in and an equal increase in the rear in order to provide the overall total volume to remain unchanged.

Regarding **claim 6**, Cherry discloses everything claimed as applied above (see claim 1), wherein Cherry discloses the system's use in an automobile (col. 3-lines 19-22) and further that the operator of the auto can balance himself to be in the center of sound (col. 3-lines 41-45), which reads on the claimed limitation.

Regarding **claim 7**, see Examiner's notes on claims 4 and 5.

Regarding **claim 8**, see Examiner's notes on claims 4 and 5.

Regarding **claim 9**, see Examiner's notes on claims 4 and 5.

Response to Arguments

4. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

5. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection. Cherry discloses the system's use in an automobile wherein the operator of the auto can balance himself to be in the center of sound. Cherry further discloses a balance control for the left and right speaker balancing as well as a fader control for front and back speaker balancing which controls the output volume of the four channels. Cherry further discloses that adjusting the balance or fader control merely changes the division of DC power and not the sum or

Art Unit: 2644

overall total gain of the channels. Therefore, it would have been obvious to one of ordinary skill in the art to use a fader control for the purpose of fading between the front and rear speakers (by arbitrary values, such as k_1 , K_1) wherein the total sum of the voltage remains the same.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. McChesney whose telephone number is (703) 308-4563. The examiner can normally be reached Monday – Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Application/Control Number: 09/986,695

Page 6

Art Unit: 2644

EAM *EAM*
February 2, 2004

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SP2, AU 2644